

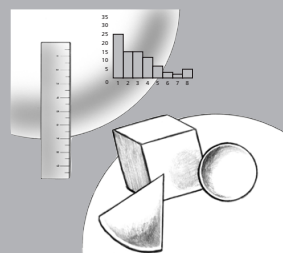
**Wisconsin Knowledge and Concepts Examinations
Criterion-Referenced Test**

Released Item Book

Mathematics

Grade

7



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Wisconsin Knowledge and Concepts Examinations—Criterion-Referenced Test
(WKCE-CRT)

Released Item Book

What are released items?

The items in this book are actual items from the fall 2005 state assessment, the Wisconsin Knowledge and Concepts Examinations—Criterion-Referenced Test (WKCE-CRT). These items will not be used again on the state assessment and may, therefore, be used in Wisconsin for professional development, improving instruction, and student practice. The items in this book illustrate the formats and kinds of items that students will encounter on the WKCE-CRT.

How do I use this book?

Professional Development

Released items are useful as educators engage in conversations about what students are expected to know and be able to do to demonstrate proficiency on the state assessments relative to the state model academic standards. Released items can inform discussions about state and local standards, curriculum, instruction, and assessment.

Improving Instruction

Teachers may use released items in classroom activities that help students understand how to:

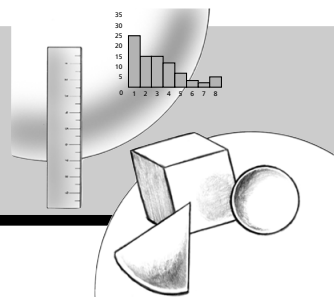
- solve problems
- determine which answer choices are correct, which are incorrect, and why
- respond to constructed response items with complete, thoughtful answers
- approach long and/or multi-step tasks
- use good test-taking strategies.

Student Practice

Students may perform better and with less anxiety if they are familiar with the format of the test and with the types of items they will be required to answer. See the accompanying guide for instructions on administering the released item book as a practice test and for the answer key. Note that a student's score on the practice test cannot be converted to a scale score, used to predict performance on the operational WKCE-CRT, or used to make inferences about the student's learning.

Mathematics

Session 1



1 What is 25% of 2,500?

- Ⓐ 100
- Ⓑ 500
- Ⓒ 625
- Ⓓ 1,000

2 Look at the number pattern below.

14, 27, 40, 53, . . .

What is the next number in the pattern?

- Ⓐ 65
- Ⓑ 66
- Ⓒ 67
- Ⓓ 70

3 $15\frac{1}{12} - 2\frac{3}{8} =$

- Ⓐ $12\frac{17}{24}$
- Ⓑ $12\frac{3}{4}$
- Ⓒ $13\frac{1}{4}$
- Ⓓ $13\frac{17}{24}$


Go On



4 In 2000, the population of Madison was 208,054 and the population of Milwaukee was 596,974. What is the best estimate for the combined population of these cities?

- Ⓐ a little less than 700,000
- Ⓑ a little more than 700,000
- Ⓒ a little less than 800,000
- Ⓓ a little more than 800,000

5 Patrick does 5 hours of housework every week as part of his chores. His parents pay him \$5 per hour for any extra housework he does during the week. The table below shows the relationship between the number of hours of housework Patrick does in one week and the amount of money his parents pay him.

Housework

Number of Hours	Pay (in dollars)
5	0
6	5
7	10
10	25

How much will Patrick's parents pay him for doing 12 hours of housework in one week?

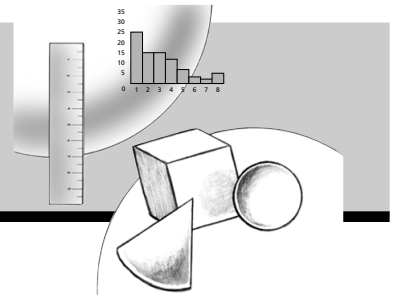
- Ⓐ \$35
- Ⓑ \$40
- Ⓒ \$55
- Ⓓ \$60

STOP 



Mathematics

Session 2



- 6** Josh recorded how fast he ran the 50-yard dash. Josh's times, in seconds, are listed below.

7.9 7.92 7.092 7

Which of these shows Josh's times ordered from least to greatest?

- (A) 7 7.9 7.92 7.092
(B) 7.092 7.92 7.9 7
(C) 7.92 7.9 7 7.092
(D) 7 7.092 7.9 7.92

7



Use the inch side of your ruler to help you solve this problem.

Dean plans to make a box that holds CD cases like the one shown below.



What is the length of the CD case? Round the answer to the nearest $\frac{1}{4}$ inch.

- (A) $4\frac{3}{4}$ inches
(B) $4\frac{7}{8}$ inches
(C) 5 inches
(D) $5\frac{1}{4}$ inches

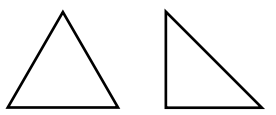
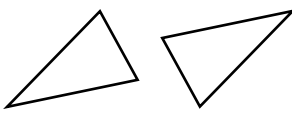
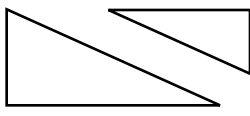
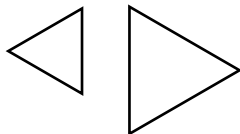
- 8** Paul uses the expression below to calculate the cost to buy concert tickets, where n = the number of tickets he buys.

$$\$28 \times n$$

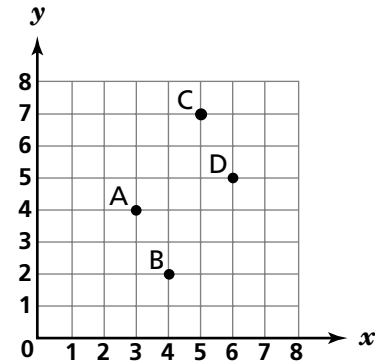
What does it cost for Paul to buy 4 concert tickets?

- (A) \$28
- (B) \$32
- (C) \$112
- (D) \$116

- 9** Which pair shows congruent triangles?

- (A) 
- (B) 
- (C) 
- (D) 

- 10** Mr. Ramirez told John to plot point A (3, 4), point B (4, 2), point C (5, 7), and point D (7, 5). The grid below shows where John plotted the points.



Which of John's points is plotted incorrectly?

- (A) A
- (B) B
- (C) C
- (D) D

11

Joan writes each letter of the word MATHEMATICS on separate pieces of paper. She puts the pieces of paper in a jar and asks a friend to pick one without looking.

Step A

What is the probability that Joan's friend will pick a paper with the letter "T"?

Answer: _____

Step B

Use what you know about probability to explain why your answer is correct. Use words, numbers, and/or symbols in your explanation.

12 Which of these is equivalent to the expression $(6 \times 2) + 0.59$?

- Ⓐ $6 \times (2 + 0.59)$
- Ⓑ $(2 \times 6) + 0.59$
- Ⓒ $(6 \times 2) \times 0.59$
- Ⓓ $2 + (6 \times 0.59)$

13 Tom researched the prices of new DVD players. The stem-and-leaf plot below shows the results of his research.

Prices of DVD Players

4	8
5	9 9
6	8
7	5 9
8	9 9
9	8

Key
9 8 = \$98

How many DVD players had a price of \$75 or less?

- Ⓐ 3
- Ⓑ 4
- Ⓒ 5
- Ⓓ 6



- 14** Celia bought one dozen 8-ounce chocolate bars for baking. How many pounds of chocolate did she buy?

16 ounces = 1 pound

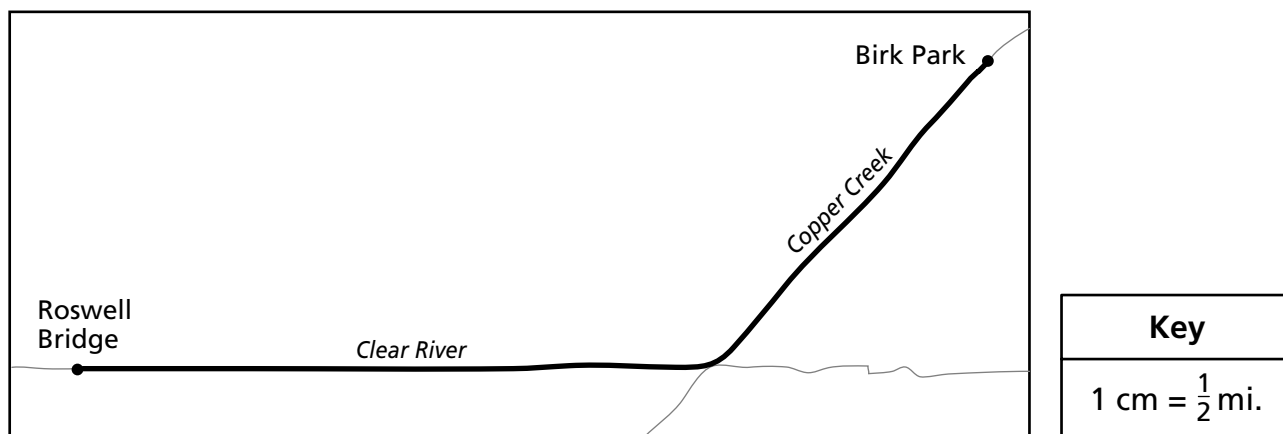
- (A) 2 pounds
- (B) 6 pounds
- (C) 8 pounds
- (D) 16 pounds

15



Use the centimeter side of your ruler to help you solve this problem.

Look at the map below.



Jesse leaves Roswell Bridge in a canoe and floats down Clear River and Copper Creek to Birk Park. What is the distance that Jesse travels?

- (A) 6 miles
- (B) 7 miles
- (C) 13 miles
- (D) 14 miles

16

A piano teacher surveyed her students about the number of hours they practiced per week. The data below shows the results of her survey.

8 6 3 3 2 7 8 5 0 7 4 8 10

What is the mode of the data set?

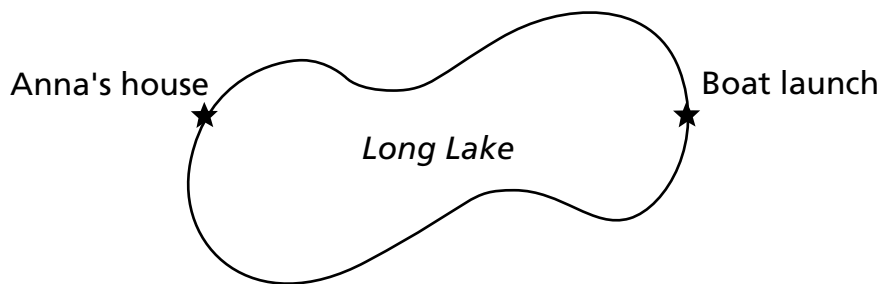
- (A) 3
- (B) 6
- (C) 7
- (D) 8

17



Use the inch side of your ruler to help you solve this problem.

Anna paddled her canoe from her house to the boat launch on Long Lake, as shown on the map below.



Key
1 in. = $\frac{1}{2}$ mi.

About how far, in miles, did Anna paddle?

- (A) $1\frac{1}{4}$ miles
- (B) $1\frac{3}{4}$ miles
- (C) $2\frac{1}{2}$ miles
- (D) 5 miles



18

Dan and Jen are making chocolate chip cookies for a bake sale. The chocolate chip cookie recipe is shown below.

Chocolate Chip Cookies

1/2 cup butter
1 egg
3/4 cup sugar
1 1/4 cups flour
1/2 teaspoon salt
1/2 teaspoon vanilla
1/2 cup chocolate chips

This recipe makes 50 cookies.

Step A

Dan and Jen need to make 150 cookies for the bake sale. How many cups of flour will they need in order to make 150 cookies?

Answer: _____ cups of flour

Step B

Using the same recipe and what you know about fractions and whole numbers, write a similar word problem. The number of cookies needed must not be 50 or 150. Your word problem should ask for the number of cups of sugar that should be used. Solve your problem and show all your work.

19

Jamal surveyed 150 people about their favorite winter activities. The graph below shows the results of Jamal's survey.

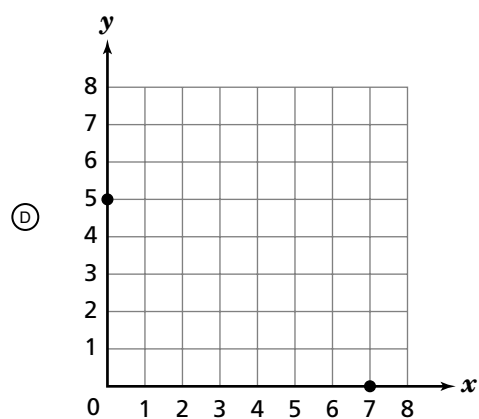
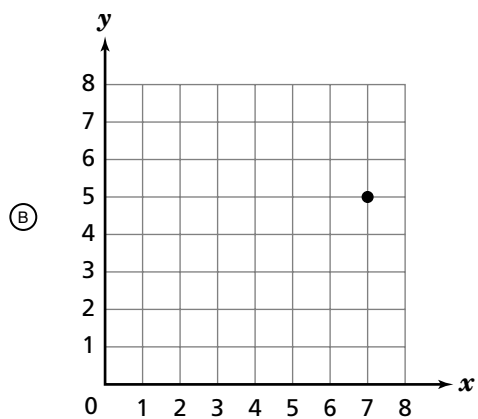
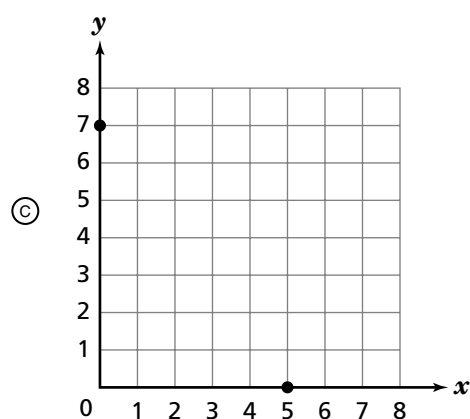
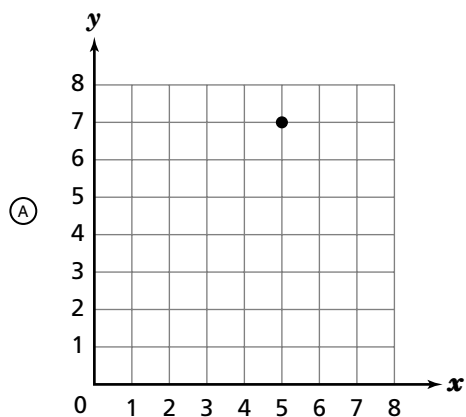


Which of these shows the total percent of people who selected activities that take place on ice?

- (A) 18%
- (B) 24%
- (C) 42%
- (D) 63%



20 Which of these is the correct representation of $(5, 7)$?



STOP 

Mathematics Grade 7

Released Item Book



Wisconsin Department of Public Instruction
Elizabeth Burmaster, State Superintendent